

The opinion in support of the decision being entered today was **not** written
for publication and is **not** binding precedent of the Board.

Paper No. 44

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte BRUCE COWGER, JOHN A. BARINAGA, JAMES E. CLARK,
JOHN A. UNDERWOOD and PAUL DAVID GAST

Appeal No. 2003-1966
Application No. 08/789,959

ON BRIEF

Before ABRAMS, NASE, and BAHR, Administrative Patent Judges.
ABRAMS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1, 4 and
7-13, which are all of the claims pending in this application.

We AFFIRM.

BACKGROUND

The appellants' invention relates to a replaceable ink container for use in an ink-jet printer having a scanning carriage. An understanding of the invention can be derived from a reading of exemplary claim 1, which has been reproduced below.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Sabonis <u>et al.</u> (Sabonis)	5,719,608	Feb. 17, 1998 (filed May 4, 1995)
Moriyama <u>et al.</u> (Moriyama)	6,050,680	Apr. 18, 2000 (filed Jun. 26, 1996)
Okazaki <u>et al.</u> (Okazaki)	6,179,415	Jan. 30, 2001 (filed Aug. 12, 1994)

Claims 1, 4 and 7-13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Moriyama in view of Okazaki.

Claims 1, 4 and 7-13 also stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Moriyama in view of Sabonis.¹

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejections, we make reference to the Answer (Paper No. 40) and the final rejection (Paper No. 34) for the examiner's complete reasoning in support of the rejections, and to the Brief (Paper No. 38) and Reply Brief (Paper No. 41) for the appellants' arguments thereagainst.

¹This was expressed as an alternative in the single rejection presented by the examiner.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by the appellants and the examiner. As a consequence of our review, we make the determinations which follow.

Representative Claim 1

A separately replaceable, off-axis ink container of a plurality of separately replaceable, off-axis ink containers for use in an ink-jet printer having a scanning carriage having a plurality of ink-jet printheads mounted therein, the scanning carriage being capable of movement along a scan axis in a print zone portion and in a non-print zone portion of the ink-jet printer such that, selective actuation of the plurality of ink-jet printheads in the print zone portion forms images on print media, the ink-jet printer having a stationary off-axis supply station in fluid communication with the scanning carriage and disposed adjacent to the non-print zone portion for receiving a plurality of separately replaceable, off-axis ink containers, the separately replaceable, off-axis ink container comprising:

an ink reservoir configured for connection with the stationary off-axis supply station to provide fluid communication with at least one of the plurality of ink jet printheads mounted in the scanning carriage, the reservoir including a fluid outlet configured for engaging a corresponding fluid inlet associated with the stationary off-axis supply station of the ink-jet printer; and

a housing associated with the ink reservoir and the fluid outlet, with the separately replaceable, off-axis ink container properly inserted into the stationary off-axis supply station of the ink-jet printer, the housing having a width associated therewith, parallel to the scan axis, that is sized to be less than a width of the non-print zone portion minus a sum of widths associated with housings of remaining separately replaceable,

off-axis ink containers of the plurality of separately replaceable, off-axis ink containers.

The Rejection Based Upon Moriyama And Okazaki

The test for obviousness is what the combined teachings of the prior art would have suggested to one of ordinary skill in the art. See, for example, In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). In establishing a prima facie case of obviousness, it is incumbent upon the examiner to provide a reason why one of ordinary skill in the art would have been led to modify a prior art reference or to combine reference teachings to arrive at the claimed invention. See Ex parte Clapp, 227 USPQ 972, 973 (Bd. Pat. App. & Int. 1985). To this end, the requisite motivation must stem from some teaching, suggestion or inference in the prior art as a whole or from the knowledge generally available to one of ordinary skill in the art and not from the appellant's disclosure. See, for example, Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1052, 5 USPQ2d 1434, 1439 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988).

The examiner is of the view that all of the subject matter recited in claim 1 is disclosed or taught by Moriyama except for the plurality of ink supply containers (6Y, 6M, 6C and 6Bk) being separately replaceable and the width of each separately replaceable ink supply container parallel to the scan axis of the printer being less than the width of the non-print zone portion minus a sum of widths of the housing of the other separately replaceable ink supply containers. For these teachings the examiner looks to Okazaki, which discloses in Figure 3 a plurality of independent ink cartridges that can be separately replaced when the ink within each has been used. According to

the examiner, it would have been obvious to one of ordinary skill in the art to modify the Moriyama printer by replacing the four attached ink containers with an equal number of separate containers, suggestion being found in Okazaki's explicit teaching that this provides the advantage of allowing an individual container to be replaced when the colored ink therein is consumed under conditions when the consumed amount of the respective inks fluctuate (Answer, page 3). The appellants have advanced several arguments in opposition to this conclusion, none of which we find to be persuasive.

The appellants do not challenge the examiner's opinion that Okazaki discloses a plurality of separately replaceable ink containers. Their arguments are (1) that the combined teachings of Moriyama and Okazaki fail to disclose or teach that each container has a width parallel to the scan axis which is sized to be less than the width of the non-print portion minus a sum of the widths of the other ink containers, and (2) that there is no suggestion to combine the references in the manner proposed by the examiner. With regard to the first argument, the appellants assert that the width of the ink containers in Moriyama is perpendicular to the scan axis, rather than parallel to it (Brief, pages 9 and 10). We do not agree, for it is quite clear to us from Figure 1 that the width of each of the containers (6Y, 6M, 6C, 6Bk), as well as the widths of composite element (6) comprising the four containers and of the secondary ink container (60), extend parallel to the scan axis, which is indicated by guide shaft 3A; it is the height of each container that is perpendicular to the scan axis.

It also is clear from Moriyama's Figure 1 that the ink containers are located adjacent to a non-print zone portion of the ink-jet printer, considering the print zone to be defined by the width of the paper feed mechanism (see P). With regard to the width limitation, even though Moriyama does not show separate ink containers, Figure 1 shows that the width of each of the portions (6Y, 6M, 6C, 6Bk) of the composite container is sized to be less than a width of the non-print zone minus a sum of the widths of the other portions of the composite container, for the four portions fit within the non-print zone. This also is the case in Okazaki, as can be seen in Figure 11, wherein the four separate and removable ink containers are located in the non-print zone of the printer (see 104), and each separate container has a width that is less than the width of the non-print zone minus the widths of the other separate containers. Thus, the width requirement is met by each of the four non-separable ink containers of Moriyama as well as each of the separable ink containers of Okazaki.

It is our view that suggestion to modify the Moriyama apparatus in the manner proposed by the examiner is explicitly present in Okazaki, which discloses using a plurality of separately replaceable ink containers for the various colors used in an ink jet printer and explains in column 1 that frequencies of use of particular ones of the four colors vary, with black typically being used more quickly, which results in the black ink container being changed more often than the others (lines 51-57). An object of the Okazaki invention is to provide an ink-jet apparatus wherein the frequency of changing

ink containers is reduced (column 5, lines 6-9), and in keeping with this objective the reference provides several embodiments of the invention, such as that explained in column 11, wherein the container for the color used most quickly is made larger than the others, so that it lasts longer (line 34 et seq.). From our perspective, Okazaki would have informed one of ordinary skill in the art of the advantage of providing a plurality of separately replaceable ink containers so as to allow an ink container that is empty to be replaced without replacing all of the others. This would have provided motivation to modify the Moriyama apparatus in the manner proposed by the examiner.

With regard to the teachings of the two references, for the most part the appellants have attacked the showings in the individual references. However, the rejection is based upon a combination of references, and therefore these arguments are not persuasive. See In re Young, 403 F.2d 754, 757, 159 USPQ 725, 728 (CCPA 1968). While we have carefully considered all of the appellants' arguments, we nevertheless have concluded that the combined teachings of Moriyama and Okazaki establish a prima facie case of obviousness with regard to the subject matter recited in independent claim 1, and we will sustain this rejection. Since the appellants have chosen to group claims 4 and 7-11 with claim 1 (Brief, page 5), the rejection of these claims also is sustained. Furthermore, we note that while the appellants have not included claims 12 and 13 in the group with the others, they have not argued the separate patentability of these claims, but have relied upon the arguments raised with

regard to claim 1 et al. (Brief, pages 14 and 15; Reply Brief, page 5), which we found not to be persuasive. We therefore will sustain the rejection of claims 12 and 13 on the basis of the same reasoning.

The Rejection Based Upon Moriyama And Sabonis

In this rejection of claims 1, 4 and 7-13, the examiner relied upon Sabonis for teaching the use of a plurality of separately replaceable ink containers. However, in this case we agree with the appellants that Sabonis fails to provide the requisite suggestion that would have motivated one of ordinary skill in the art to modify Moriyama in the manner proposed by the examiner. Sabonis is directed to an improved ink delivery system for large format ink jet printers. While Sabonis discloses four ink jet sources 48 in four containers 50, the examiner has not directed us to information in this reference which would provide suggestion to one of ordinary skill in the art to replace the system disclosed in Moriyama with separately replaceable containers, and we have not found such on our own.

We therefore are of the view that the combined teachings of Moriyama and Sabonis fail to establish a prima facie case of obviousness with regard to the subject matter recited in independent claims 1, 12 and 13, and we will not sustain this rejection.

CONCLUSION

The rejection of claims 1, 4 and 7-13 as being unpatentable over Moriyama in view of Okazaki is sustained.

The rejection of claims 1, 4 and 7-13 as being unpatentable over Moriyama in view of Sabonis is not sustained.

A rejection of each of the claims having been sustained, the decision of the examiner is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

NEAL E. ABRAMS
Administrative Patent Judge

JEFFREY V. NASE
Administrative Patent Judge

JENNIFER D. BAHR
Administrative Patent Judge

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Appeal No. 2003-1966
Application 08/789,959

Page 10

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